Renal Services, Dialysis Centre

Buttonhole Cannulation Technique

What is buttonhole technique?

Buttonhole is a way of cannulating (putting needles in) your fistula. The needles are inserted in exactly the same spot at every dialysis session, like a button into a buttonhole. This technique can only be used for fistulas and not for grafts.

Is it harmful for my fistula to have the needle in the same place all the time?

It is harmful to go in the same area using different holes, as this weakens the vein wall, causing aneurysm (bulging). With the buttonhole, the exact same hole is used for every dialysis session and over time a tract or tunnel forms. This prevents aneurysms forming and offers other benefits such as reduced pain when needles go in and reduced bleeding times when the needles are removed.

Is the buttonhole technique a new procedure?

No, it has been used in Europe for more than 25 years, with great success. It is becoming more popular in the UK since the recent introduction of blunt needles.

What are blunt needles?

Blunt needles are rounded at the top and do not have sharp edges like traditional dialysis needles. The buttonhole technique develops a tract so you do not need to use sharp needles to enter the vein. Blunt needles also prevent damaging the formed tract.

What is a tract?

The tract is a tunnel created by the formation of scar tissue – exactly like the hole created for earrings in a pierced ear. This tract goes from the surface of the skin to the vein. Once the tract is well healed there are no nerves or tissues in the path of the needle to cause you any pain when the needles go in.

How long does it take before I can use blunt needles?

For most people, it takes about two weeks or six dialysis sessions before a tract develops. A normal sharp needle (both arterial and venous access) are used for the first dialysis session, introduce blunt needles using biohole plug for six dialysis sessions until the formation of tract which will promote easy accessibility in cannulation.
How long will the buttonhole last?
The pair buttonholes can be used indefinitely if there are no problems. Over time, the nurses may develop another pair of buttonholes sites on your fistula, for backup.

What happens if I dialyse at a unit that does not use this technique?
If the unit you are dialysing at does not use this technique, they can needle another part of your fistula using the normal sharp needles. We will inform the staff on the other unit at the earliest opportunity that we use the buttonhole technique with you and we will advise them about needling your fistula.

We will resume the buttonhole technique when you come back to us.

What are the advantages of using the buttonhole technique?
Research has shown that these are:

- Fewer ‘blows’ – when blood leaks from the vein into the surrounding skin, causing swelling and pain.
- Fewer problems locating the vein
- Less pain when inserting the needles
- Less chance of aneurysms (bulging) forming. Aneurysms can weaken the vein wall

When will I start using the buttonhole technique?
Your primary nurse will advise you about using this technique.

Is there anything special I need to do with my fistula when using the buttonhole technique?
No. You will wash your fistula arm as normal and your nurse will do the rest. The nurse will need to remove the scab from the buttonhole before the needling takes place, if it has not been removed by washing. This will help reduce the risk of infection. Care of your fistula remains the same.

If you require further information please speak to one of our dialysis nurses or contact the details provided.
Contact:
Clinical Nurse Specialist CNS-Vascular Access
Tel/Fax: 01223 400182

Addenbrookes HD Unit: 01223 400180
Kings Lynn HD Unit: 01553613544
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References:


Privacy & Dignity
We are committed to treating all patients with privacy and dignity in a safe, clean and comfortable environment. This means, with a few exceptions, we will care for you in same sex bays in wards with separate sanitary facilities for men and women.

In some areas, due to the nature of the equipment or specialist care involved, we may not be able to care for you in same sex bays. In these cases staff will always do their best to respect your privacy and dignity, eg with the use of curtains or, where possible, moving you next to a patient of the same sex. If you have any concerns, please speak to the ward sister or charge nurse.
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

Document history

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